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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VUONG, BACH Q

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/991,632	Applicant(s) SEO ET AL.	
	Examiner Bach Q. Vuong	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-27 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, 15, 16, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 4, 10-14 and 17-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

This communication is responsive to an amendment filed on 12/27/2004

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 7-9, 15, 16, 23 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagano (US 6,222,815).

Regarding claim 1, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, comprising: sampling the current power value of the optical signal output from the laser diode (see circuit 5 in Fig. 1); comparing the sampled current power value with the basic power value (see Comparator circuit 7 and disk identifying section 13), the basic power value being a target value based upon a type of a medium that is to receive the output of the laser diode (see column 5, lines 16-30); and controlling the output of the laser diode based on the compared results (see ALPC 11).

Regarding claim 2, see Figs. 1-3 which show an apparatus for automatically controlling an output of laser diode based on the results of a comparison between the current power value of an optical signal output from a laser diode and a basic power value, comprising: a sampler (see circuit 5) sampling the current power value output from the laser diode; a register unit storing the output of sampler (see circuit 5); a basic register unit storing a basic power value

Art Unit: 2653

(see LPF 8 and Output S5), the basic power value being a target value based upon a type of medium that is to receive the output of the laser diode (see circuits 7 and 13); an operator unit outputting a target output value applied to the laser diode based on the current power value stored in the register unit and the basic power value stored in the basic register unit; and a pulse generator (see circuits 14-15 and 6) generating a control signal controlling a storage timing of the register unit based on recording data to be recorded by the laser diode.

Regarding claim 3, see Fig. 1 which show an apparatus for automatically controlling an output of laser diode based on the results of a comparison between the current power value of an optical signal output from a laser diode and a basic power value wherein the sampler (see circuit 5) is an analog/digital converter.

Regarding claim 7, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, further comprising holding the sampled current power prior to the comparing (see circuits 5 and 7).

Regarding claim 8, see Figs. 1-3 which show a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of an optical signal output from the laser diode and a basic power value, further comprising generating a control signal (see S2 based on recording data to be recorded by the laser diode on a medium; storing a basic power value (see circuit 5); wherein the comparing comprises comparing the stored sampled current power with the basic power value (see circuits 7 and 13).

Regarding claim 9, see Fig. 1 which shows a method of automatically controlling an output of a laser diode based on the results of a comparison between the current power value of

Art Unit: 2653

an optical signal output from the laser diode and a basic power value wherein basic power value based upon a type of a medium which is based on a format of the medium and a maker of the medium (see circuits 13-15).

Regarding claims 15 and 16, see the rejection applied to claim 2.

Regarding claim 23, Figs. 1-3 which show an apparatus for automatically controlling an output of laser diode having an optical signal with current power value, comprising: a sampler (see circuit 5) sampling the current power value output from the laser diode; a register unit storing the output of sampler (see circuit 5); an operation unit (see circuits 7 and 13) outputting a target output value based upon the sampled current value and a basic power value based upon a type of medium which is to receive the output of the laser diode; and a controller (see ALPC 11) controlling the output of the laser diode based upon the target value.

Regarding claim 24, Figs. 1-3 which show an apparatus for automatically controlling an output of laser diode having an optical signal with current power value, further register (see circuit 5) storing the output of the sampler prior to being received by the operation unit; and a basic register unit storing the basic power value prior to being received by the operation unit (see circuits 7 and 13).

Claim Rejections - 35 USC § 112

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2653

In claim 5, the limitation recited in lines 1-3 that “a digital/analog converter converting the output of the multiplexer to a digital/analog signal ...”, is unclear and confusing because there is no structure of a multiplexer recited in the parent claim (i.e., claim 2). Accordingly, it is unclear how the Digital/Analog converter can get and convert output from the multiplexer to a D/A signal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano (US 6,222,815) in view of Arai (US 6,317,405).

Nagano, according to Figs. 1-3, shows all the features of the instant claimed invention (see the rejection above) except for the use of a Digital/analog converter for converting the output of the multiplexer to a D/A signal and then transmitting the D/A signal to the laser diode as particularly recited in claim 5. Arai, according to Figs. 1-2, teaches the use of a Digital/Analog converter for converting the output signal from comparators to laser driver (see Digital/Analog converters DAC 22 or 23 in Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a digital/analog

Art Unit: 2653

converter as taught by Arai into an automatic laser power control of the optical pickup of Nagano in order to control a laser power to be used for recording on an optical disk.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano (US 6,222,815) in view of Kim et al. (US 6,781,934).

Nagano, according to Figs. 1-3, shows all the features of the instant claimed invention (see the rejection above) except for the use of an apparatus for automatically controlling an output of the laser diode which is built into a pickup as recited in claim 6. Kim, according to Figs. 3-5, teaches the use of a laser diode unit of a pickup forming an integral optical structure (see an optical pickup in Figs. 3-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an integral optical system as taught by Kim into the optical pickup of Nagano in order to provide an optical pick-up having a slim structure.

Allowable Subject Matter

Claims 4, 10-14 and 17-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 25-27 are allowed.

Response to Arguments

In response to Applicant's arguments filed 12/27/2004 related to the rejection under 35 USC-102 as being anticipated by Nagano (US 6,222,815). Applicant's attention is drawn to Figs. 1-3 which show comparing the sampled current power value with basic power value (see circuits 5, 7 and 13 for details) wherein the basic power value being target value based on a type of a medium that is to receive the output of the laser diode (see column 5, lines 16-30). Accordingly, Nagano does disclose all limitations as recited in claims 1-3 and 7-9. Thus, the rejection applied to the claimed invention is maintained.

Cited References

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references relate to an optical pickup apparatus for and method of controlling light power used for recording on optical disk.

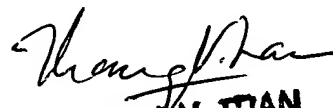
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bach Q. Vuong whose telephone number is (571) 272-7596. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-5789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2653

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BV
May 13, 2005


THANG V. TRAN
PRIMARY EXAMINER